

CLAIMS

That which is claimed is:

1. A formulation for treating cancer, comprising:
a component of blood obtained from a patient to be treated; and
a pharmaceutically acceptable carrier.
2. The formulation of claim 1, wherein the component of blood is platelet-rich-plasma (PRP).
3. The formulation of claim 2, wherein the PRP is subjected to energy waves to form a platelet releasate.
4. The formulation of claim 3, wherein a protein component of the platelet releasate is removed.
5. The formulation of claim 3, wherein a plurality of components of the platelet releasate are removed.
6. The formulation of claim 3, further comprising:
a recombinantly produced human protein.
7. The formulation of claim 1, wherein the carrier is an injectable carrier.
8. The formulation of claim 7, wherein the injectable carrier comprises a pH buffering agent.
9. The formulation of claim 3, wherein substantially all human growth hormone naturally present in the platelet releasate is removed.
10. The formulation of claim 3, further comprising:
bicarbonate buffer in a molarity sufficient to adjust formulation pH to within a range of about 7.2 to about 7.6.

11. A method, comprising:
 - extracting blood from a patient;
 - concentrating platelets from the blood;
 - processing the platelets in a manner which breaks open the platelets and obtaining a platelet releasate; and
 - administering the platelet releasate to the patient.
12. The method of claim 11, wherein the processing comprises exposing the platelets to energy waves.
13. The method of claim 11, wherein the administering comprises injecting the platelet releasate into a tumor of the patient.
14. The method of claim 1, wherein the administering comprises injecting the platelet releasate into a cancerous tumor of the patient.
15. The method of claim 14, further comprising:
 - separating a substantially all growth factor protein from the platelet releasate prior to administering the platelet releasate to the patient.
16. A method of treating cancer, comprising:
 - extracting blood from a patient;
 - concentrating platelets from the blood;
 - processing the platelets in a manner which breaks open the platelets
 - obtaining a platelet releasate;
 - formulating the platelet releasate into an injectable formulation buffered to a pH of $7.4 \pm 5\%$; and
 - administering a therapeutically effective amount of the formulation to a patient.
17. The method of claim 9 wherein the patient treated with the formulation is the same patient from which the blood is extracted from, and the formulation is buffered to pH $7.4 \pm 2\%$; and wherein the platelets are processed for a period of time and under conditions

so as to break open 90% or more of the platelets; and further wherein the patient from which the blood is extracted is the same patient to which the formulation is administered.

18. The method of claim 17, further comprising:
repeatedly administering a therapeutically effective amount of the formulation to the patient over a period of time while monitoring the patient and adjusting dosing to effectively treat the cancer.
19. A method of treatment, comprising:
extracting blood from a patient;
concentrating platelets from the blood;
processing the platelets in a manner which breaks open the platelets obtaining a platelet releasate;
placing cells on a culture median comprising the platelet releasate;
allowing the cells to proliferate on the culture medium;
isolating the cultured cells;
formulating the isolated cells into an injectable formulations; and
administering the injectable formulation to a patient.
20. The method of claim 19, wherein the cells placed on the culture medium are obtained from the same patient the blood is extracted and the cells are from the patient's bone marrow prior to subjecting the patient to radiation;
wherein the ultrasound processing is carried out for a period of time and under conditions so as to break open 90% or more of the platelets; and
wherein the blood is extracted from the same patient as the cells and the cells comprise adult stem cells.
21. A method of culturing cells, comprising:
isolating cells from a patient;
placing the cells on a medium comprising platelet-rich plasma; and
allowing the cells to proliferate.

22. The method of claim 21, wherein the isolated cells are extracted from the patient's bone marrow which cells are isolated from the same patient as the platelets of the platelet-rich plasma are obtained.

23. A method of treating cancer, comprising:
extracting blood from a patient;
concentrating platelets from the blood;
processing the platelets in a manner which breaks open the platelets
obtaining a platelet releasate;
formulating the platelet releasate into an injectable formulation buffered to a pH of $7.4 \pm 5\%$;
surgically removing a cancerous tumor from a patient; and
administering a therapeutically effective amount of the formulation to an area where the tumor was removed.

24. The method of claim 23 wherein the patient treated with the formulation is the same patient from which the blood is extracted from, and the formulation is buffered to pH $7.4 \pm 2\%$; and

wherein the platelets are processed for a period of time and under conditions so as to break open 95% or more of the platelets; and

wherein the patient from which the blood is extracted is the same patient from which tumor is removed and the formulation is administered.

25. The method of claim 24, further comprising:
repeatedly administering a therapeutically effective amount of the formulation to the area where the tumor was removed over a period of time while monitoring the patient and adjusting dosing.

26. A method of treating cancer, comprising the steps of:
isolating white blood cells from a patient;
subjecting the white blood cells to a treatment whereby cell membranes are opened and a white blood cell releasate obtained;
formulating the white blood cell releasate to create an injectable formulation;

and

injecting the formulation into a patient.

27. The method of claim 26, further comprising:

sorting the white blood cells prior to treatment and isolating a desired type of white blood cell for treatment and the formulation is injected into a cancerous tumor of the patient.

28. The method of claim 27, wherein the patient from which the white blood cells are isolated is the same patient to which the formulation is injected.